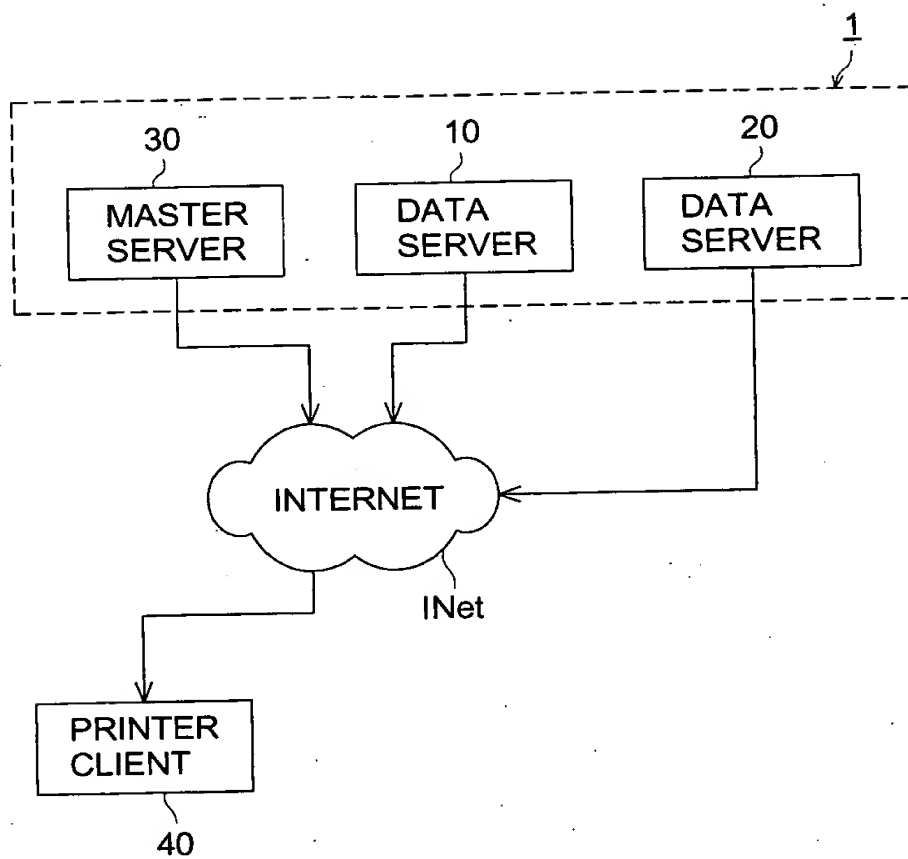
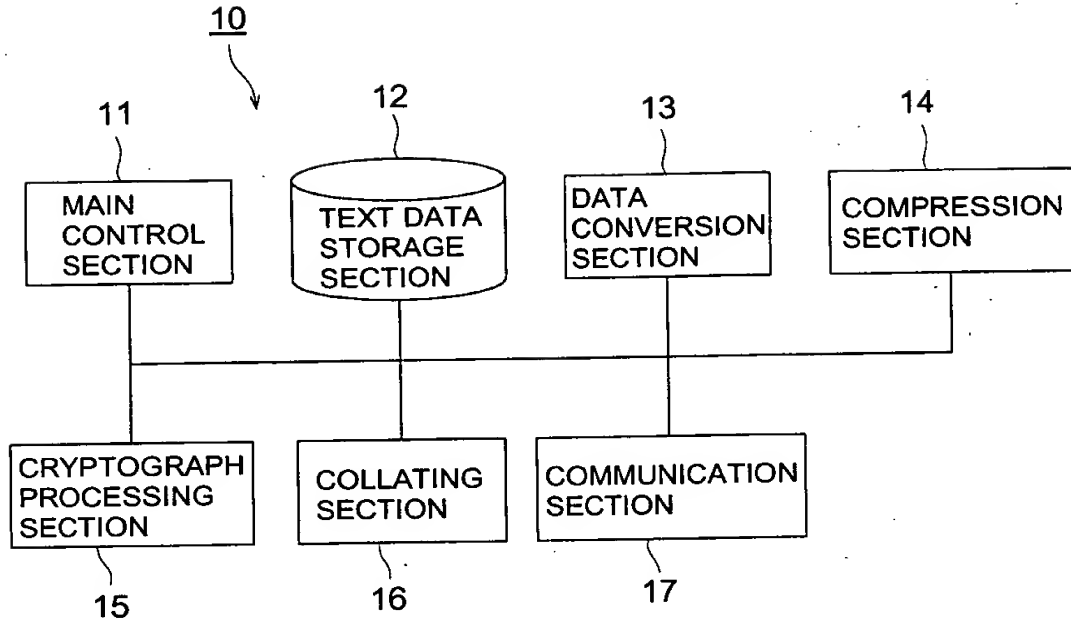


FIG. 3



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FIG. 4



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FIG. 5

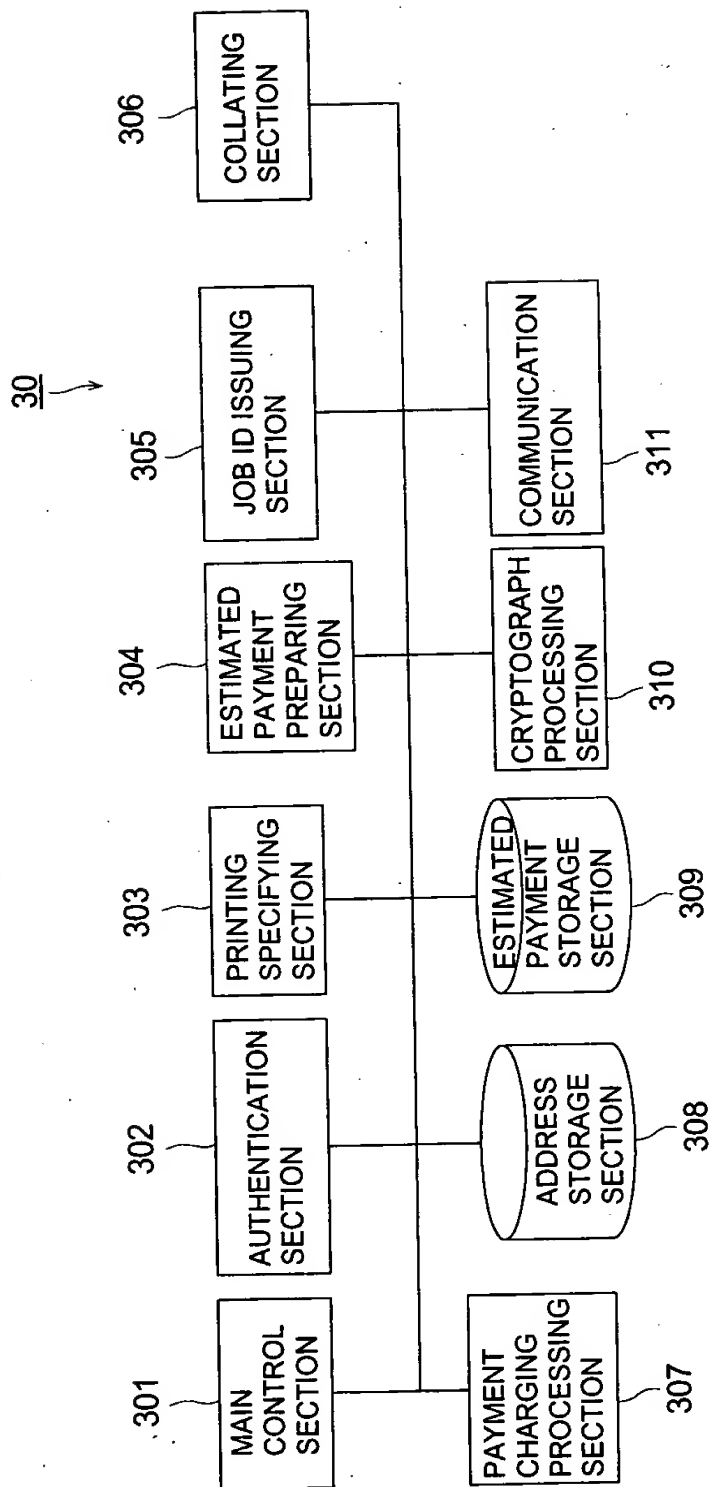


FIG. 6

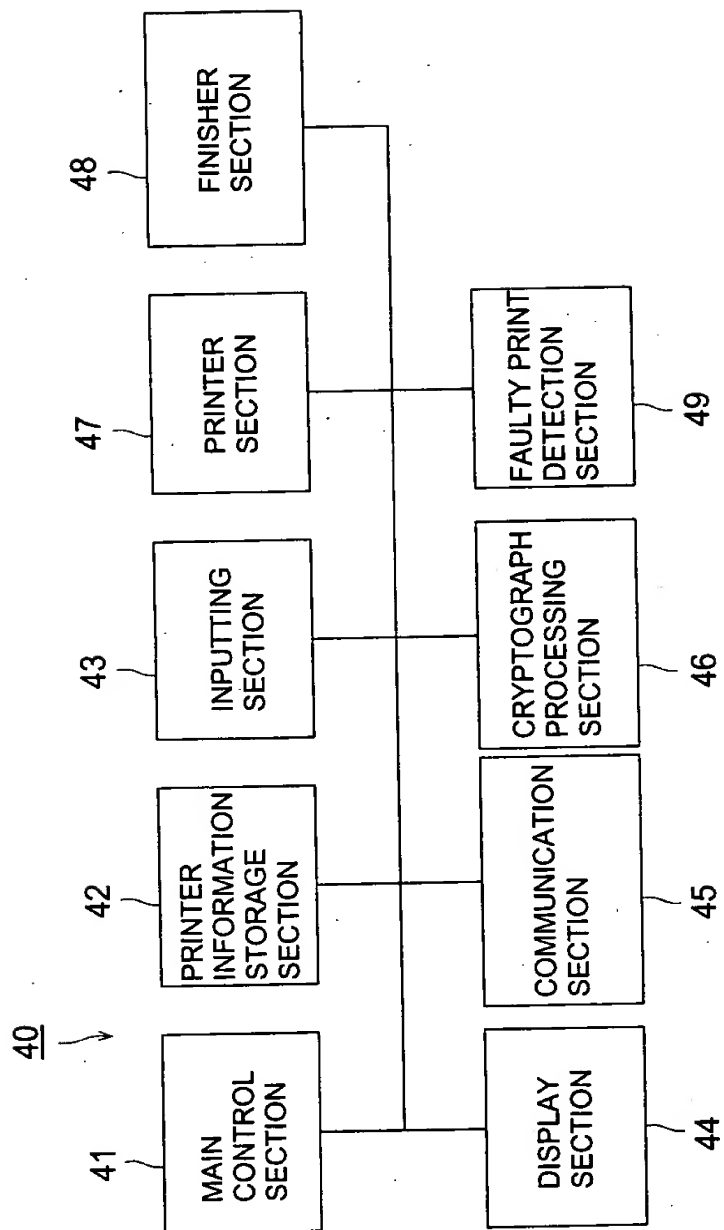
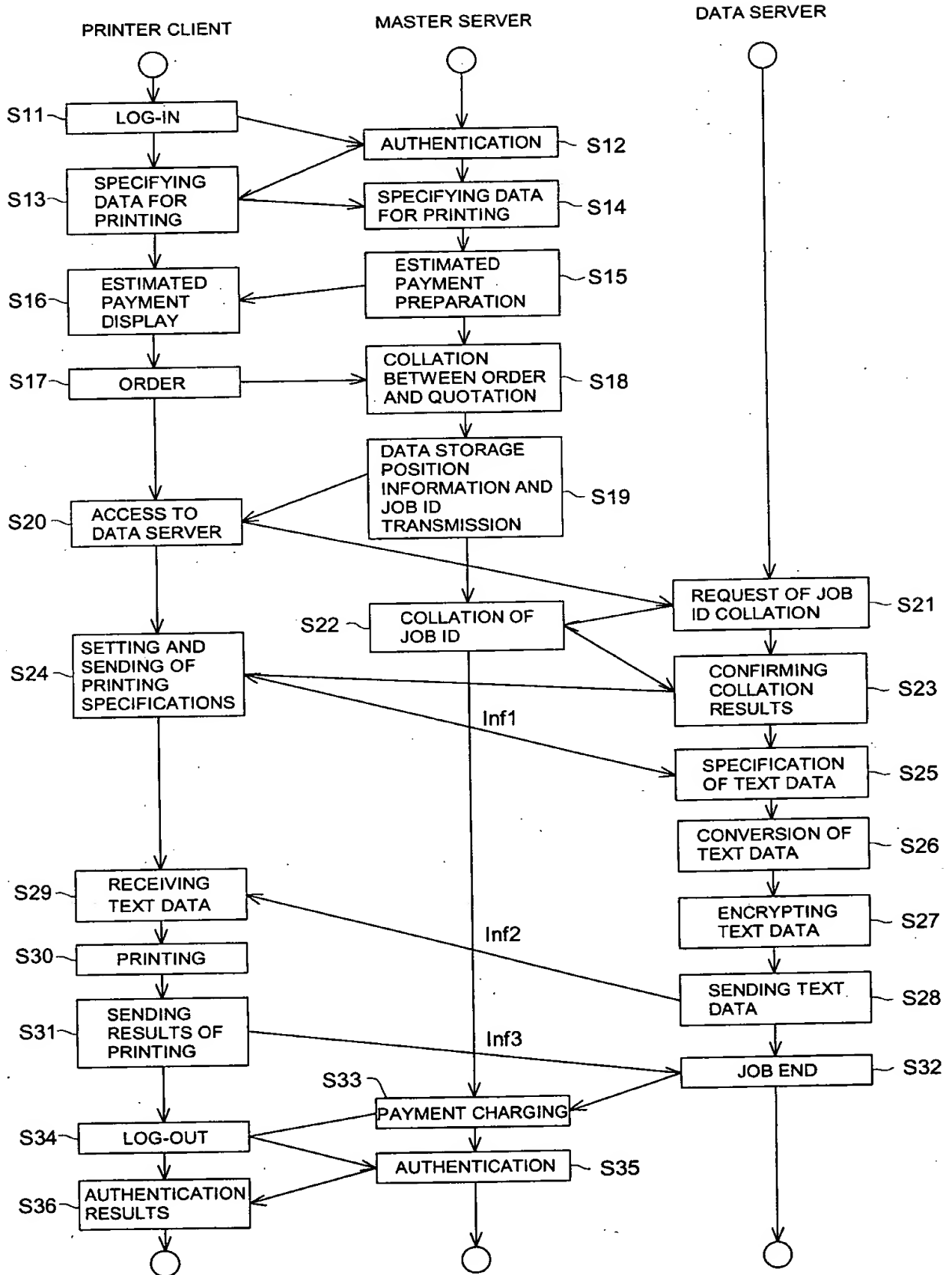
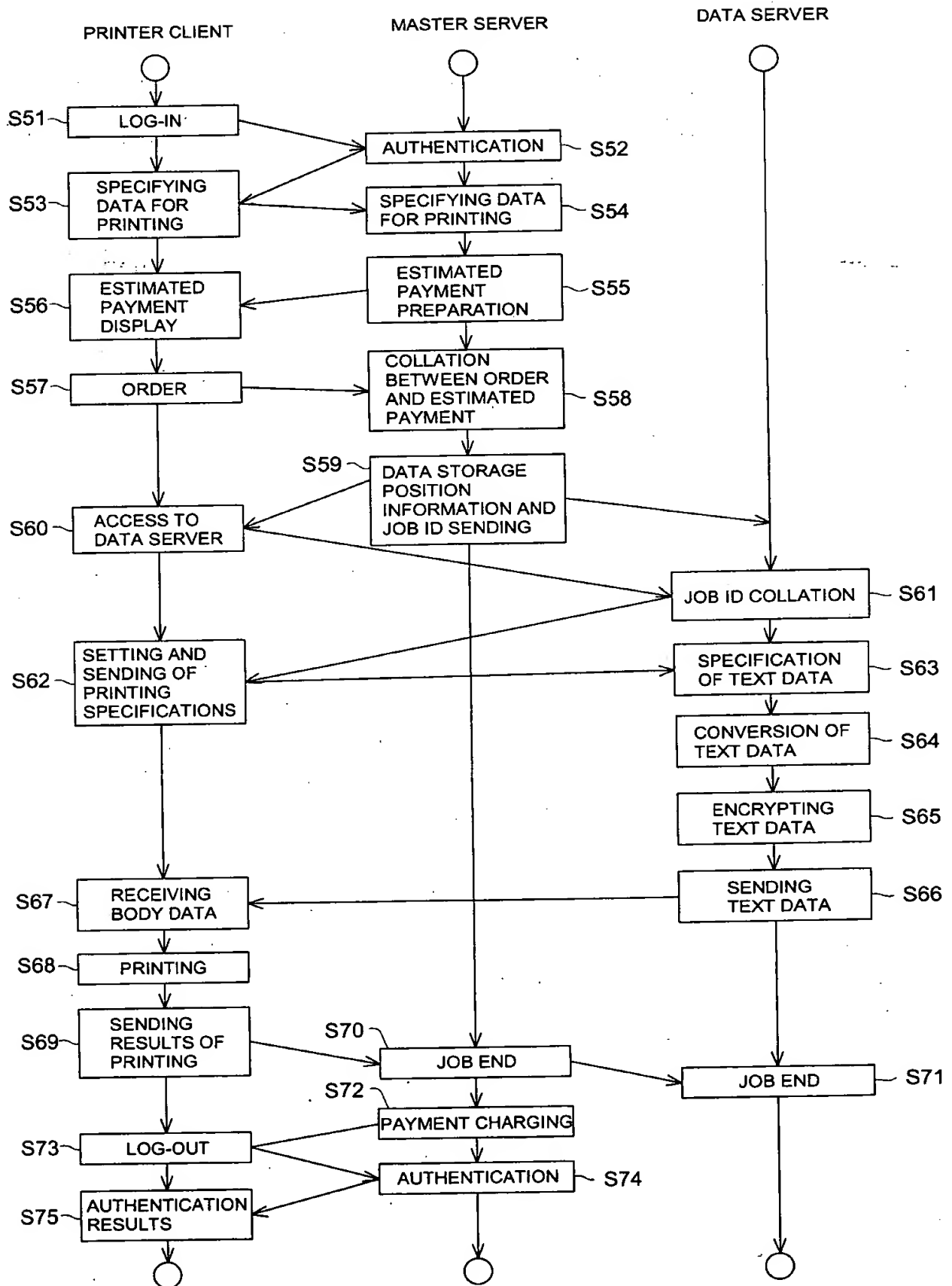


FIG. 7



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FIG. 8



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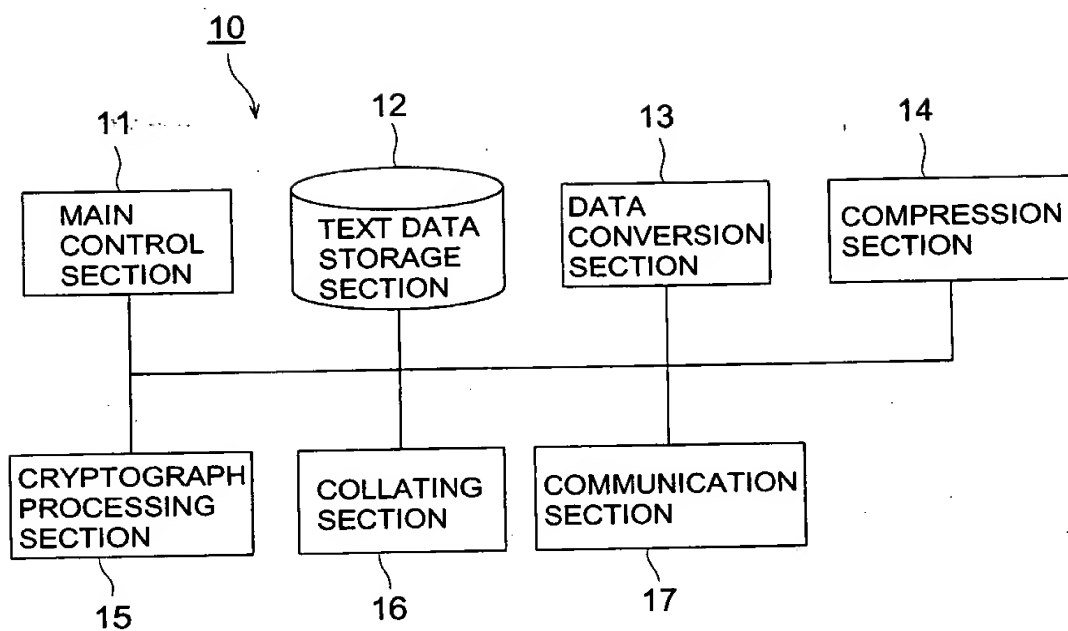
FIG. 9

REPRINTING CHARGES = FIRST CHARGE INFORMATION + SECOND CHARGE INFORMATION

COPYRIGHT ROYALTY	CHARGE OF MATERIALS USED
CHARGE OF MAKING DATA	RENTAL FEE OF MACHINE
SERVICE CHARGE	

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FIG. 10



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FIG. 11

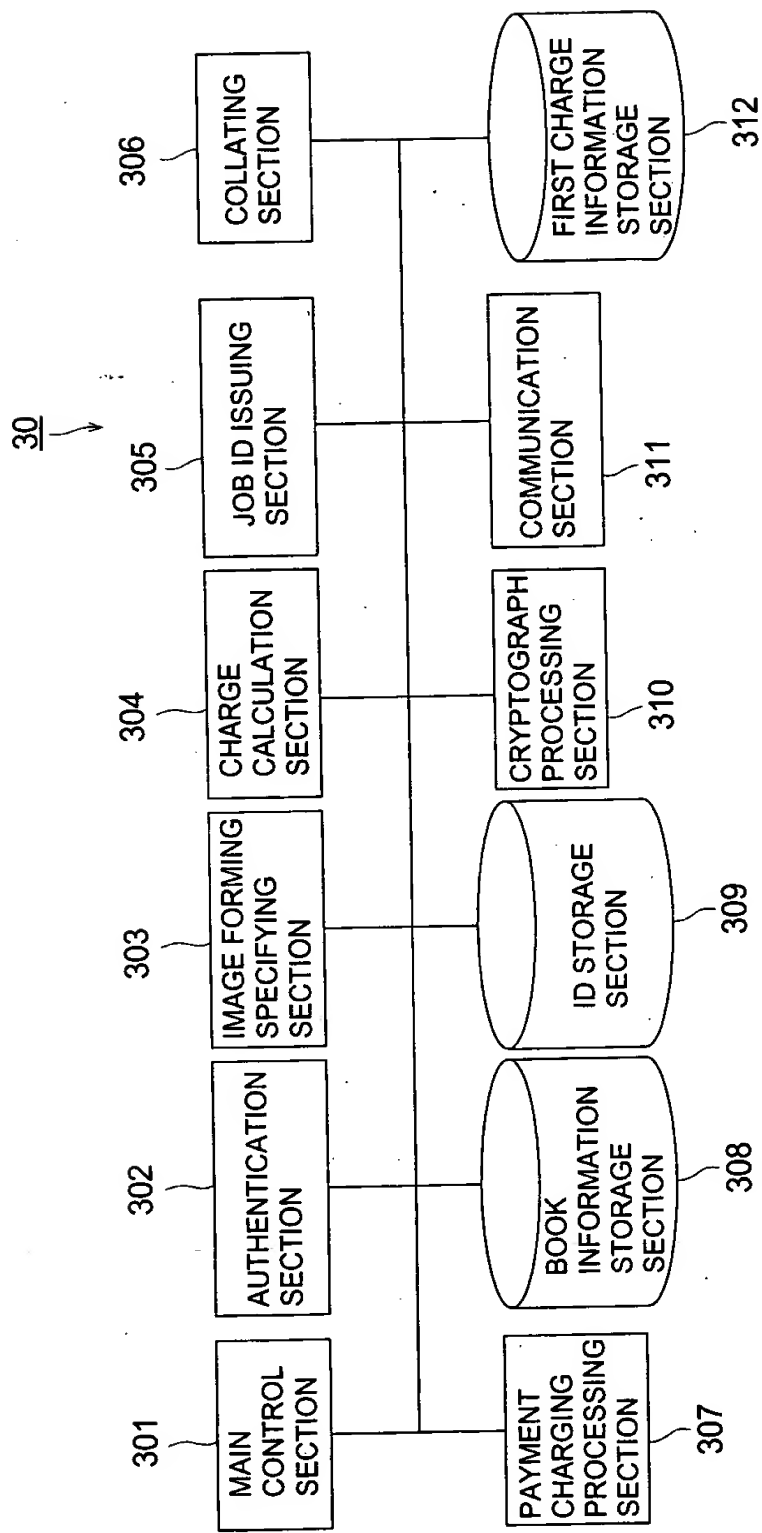
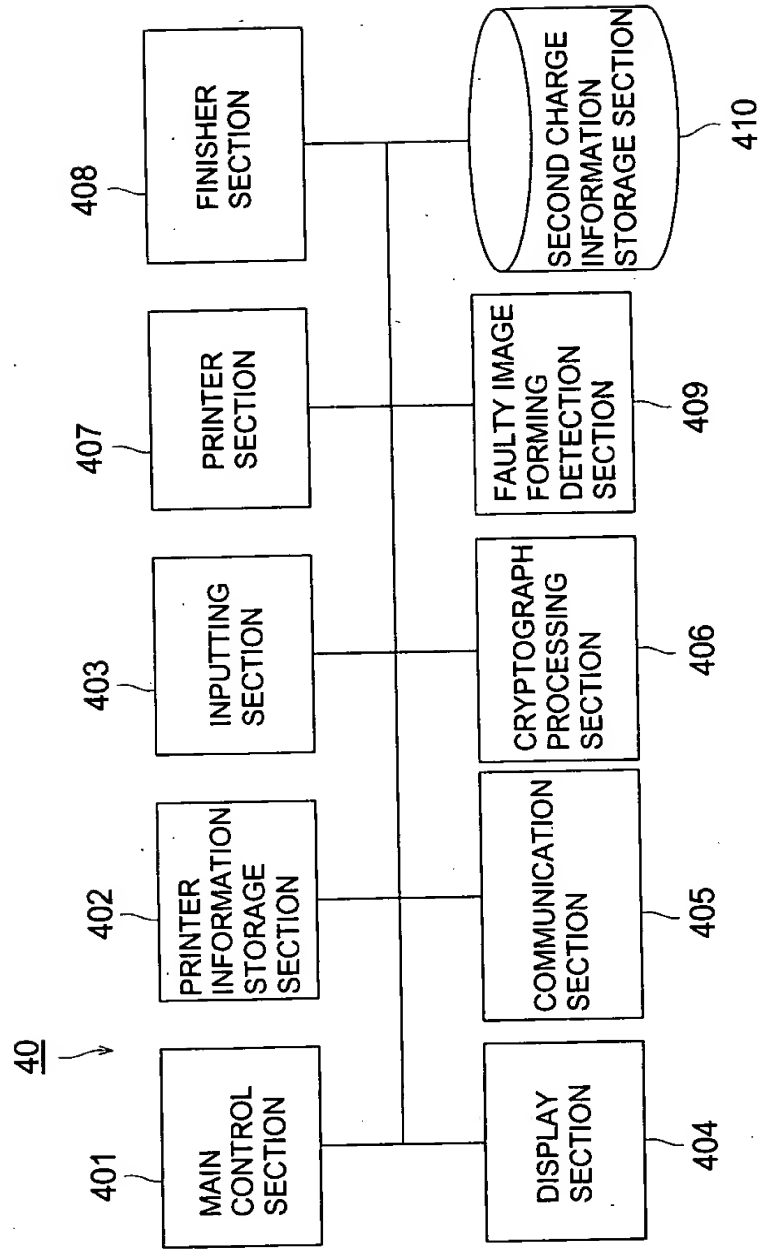


FIG. 12



```

graph TD
    subgraph Printer_Client [PRINTER CLIENT]
        S11(( )) --> S11[LOG-IN]
        S11 --> S13[SPECIFYING BOOKS]
        S13 --> S16[ESTIMATED PAYMENT CALCULATION]
        S16 --> S17[ESTIMATED PAYMENT DISPLAY]
        S17 --> S18[ORDER]
        S18 --> S21[ACCESS TO DATA SERVER]
        S21 --> S25[TRANSMISSION OF IMAGE FORMING CONDITIONS]
        S25 --> S30[RECEIVING IMAGE DATA]
        S30 --> S31[PRINTING]
        S31 --> S32[TRANSMISSION OF RESULTS OF PRINTING]
        S32 --> S34[TRANSMISSION OF SECOND CHARGE INFORMATION]
        S34 --> S37[LOG-OUT]
        S37 --> S39[AUTHENTICATION RESULTS]
        S39 --> End1(( ))
    end

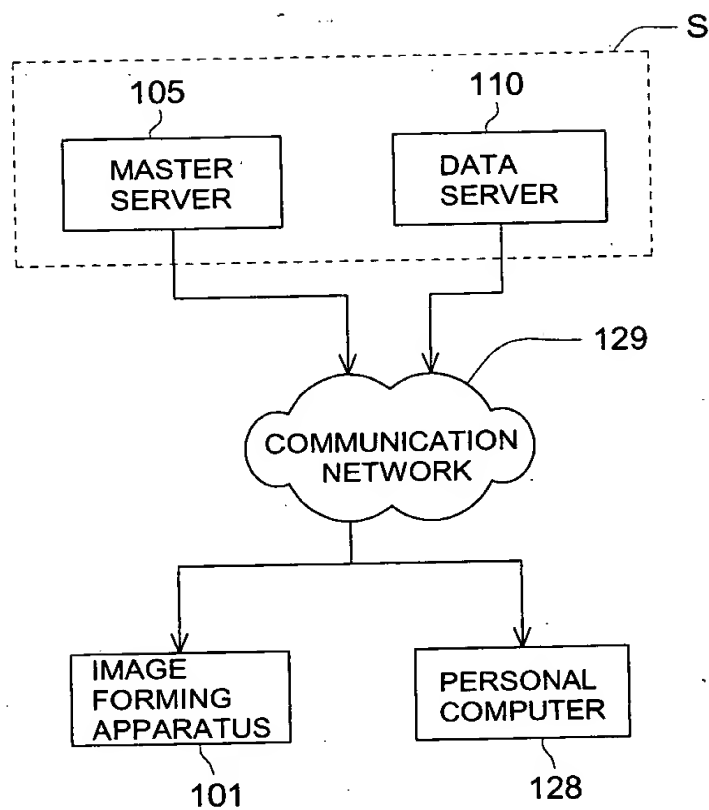
    subgraph Master_Server [MASTER SERVER]
        S12(( )) --> S12[AUTHENTICATION]
        S12 --> S14[SPECIFYING DATA FOR IMAGE FORMING]
        S14 --> S15[TRANSMISSION OF FIRST CHARGE INFORMATION DATA STORAGE POSITION INFORMATION AND JOB ID SENDING]
        S15 --> S17
        S15 --> S19[JOB ID ISSUANCE]
        S19 --> S20[DATA STORAGE POSITION INFORMATION AND JOB ID TRANSMISSION]
        S20 --> S21
        S20 --> S23[COLLATION OF JOB ID]
        S23 --> S25
        S23 --> S26[SPECIFICATION OF IMAGE DATA]
        S23 --> S35[Calculation of Reprinting Charges]
        S35 --> S36[PAYMENT CHARGING PROCESSING]
        S36 --> S38[Authentication]
        S38 --> S39
        S38 --> End2(( ))
    end

    subgraph Data_Server [DATA SERVER]
        S22(( )) --> S22[REQUEST OF JOB ID COLLATION]
        S22 --> S24[CONFIRMING COLLATION RESULTS]
        S24 --> S26
        S26 --> S27[CONVERSION OF IMAGE DATA]
        S27 --> S28[ENCRIPTING IMAGE DATA]
        S28 --> S29[TRANSMISSION OF IMAGE DATA]
        S29 --> S33[JOB END]
        S33 --> End3(( ))
    end

    S11 --> S12
    S13 --> S14
    S15 --> S16
    S18 --> S19
    S20 --> S21
    S21 --> S22
    S23 --> S24
    S25 --> S26
    S25 --> S29
    S32 --> S35
    S34 --> S35
    S35 --> S36
    S36 --> S38
    S38 --> S39
  
```

The flowchart illustrates the process of an image forming system involving three main components: a PRINTER CLIENT, a MASTER SERVER, and a DATA SERVER. The process begins with the PRINTER CLIENT performing a LOG-IN (S11), which triggers an AUTHENTICATION process (S12) on the MASTER SERVER. The PRINTER CLIENT then specifies books (S13), leading to the MASTER SERVER specifying data for image forming (S14). The PRINTER CLIENT calculates estimated payment (S16) and displays it (S17), while the MASTER SERVER transmits first charge information, data storage position information, and job ID sending (S15) to the PRINTER CLIENT. The PRINTER CLIENT places an order (S18), leading to job ID issuance (S19) on the MASTER SERVER. The MASTER SERVER then transmits data storage position information and job ID transmission (S20) to the PRINTER CLIENT. The PRINTER CLIENT accesses the data server (S21), which requests job ID collation (S22) from the DATA SERVER. The DATA SERVER confirms collation results (S24) and specifies image data (S26). The PRINTER CLIENT transmits image forming conditions (S25) to the DATA SERVER, which converts image data (S27) and encrypts it (S28). The PRINTER CLIENT receives image data (S30) and prints it (S31). The PRINTER CLIENT transmits results of printing (S32) to the MASTER SERVER, which calculates reprinting charges (S35). The PRINTER CLIENT transmits second charge information (S34) to the MASTER SERVER, which processes payment charging (S36). The PRINTER CLIENT logs out (S37), leading to authentication results (S39) on the MASTER SERVER. The DATA SERVER transmits image data (S29) to the MASTER SERVER, which then transmits job end (S33) to the DATA SERVER. The process concludes with the PRINTER CLIENT performing authentication results (S39) and the MASTER SERVER performing authentication (S38).

FIG. 14



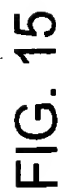


FIG. 16 (a)

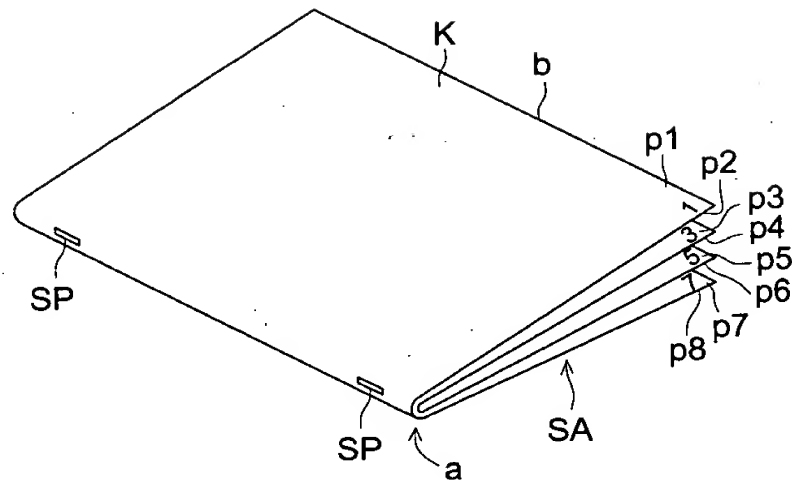


FIG. 16 (b)

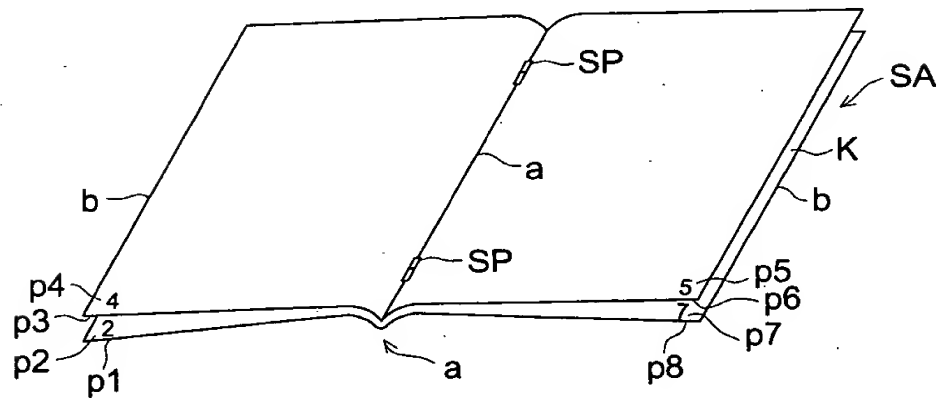
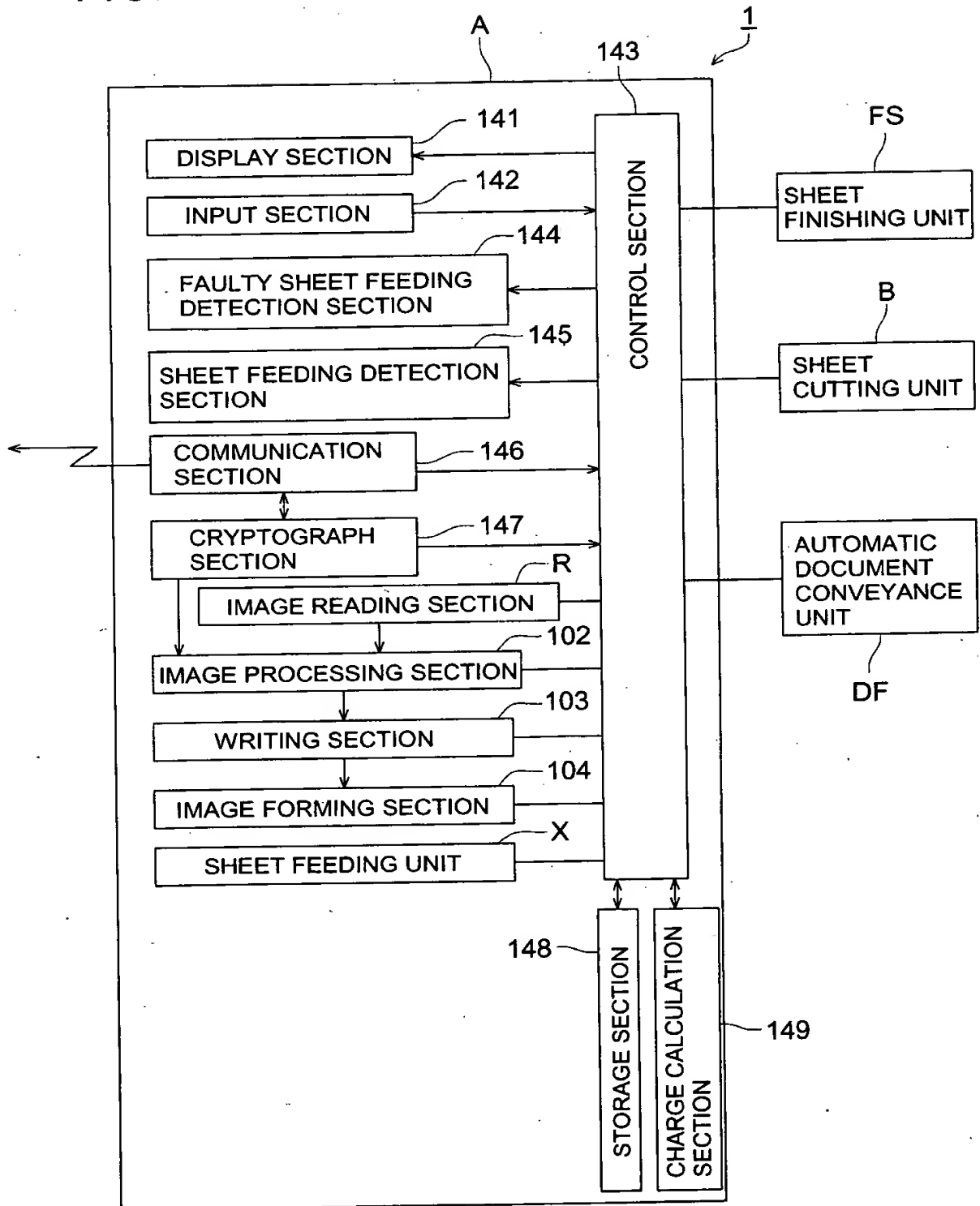




FIG. 17



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FIG. 18 (A)

FIRST TRANSMISSION REQUEST

TIME AND DATE OF TRANSMISSION  
TYPES OF REQUEST  
TYPES OF REQUEST  
SOURCE NAME  
GENERATION REQUEST ID  
TARGET FOR PRINTING 112 PERSONS  
NAMES OF BOOKS  
RETRIEVAL REQUEST  
.  
.  
.

FIG. 18 (B)

SECOND TRANSMISSION REQUEST

TIME AND DATE OF TRANSMISSION  
TYPES OF REQUEST  
SOURCE NAME  
GENERATION REQUEST ID  
NAMES OF BOOKS  
PAYMENT METHOD  
PRINTING CONDITIONS  
STATE OF SHEET FEEDING  
PRINTING UNIT COST  
.  
.  
.

FIG. 18 (C)

CHARGE PAYMENT INFORMATION

TIME AND DATE OF TRANSMISSION  
TYPES OF REQUEST  
SOURCE NAME  
GENERATION REQUEST ID  
NAMES OF BOOKS  
CARD INFORMATION  
QUOTATION CODE  
.  
.  
.

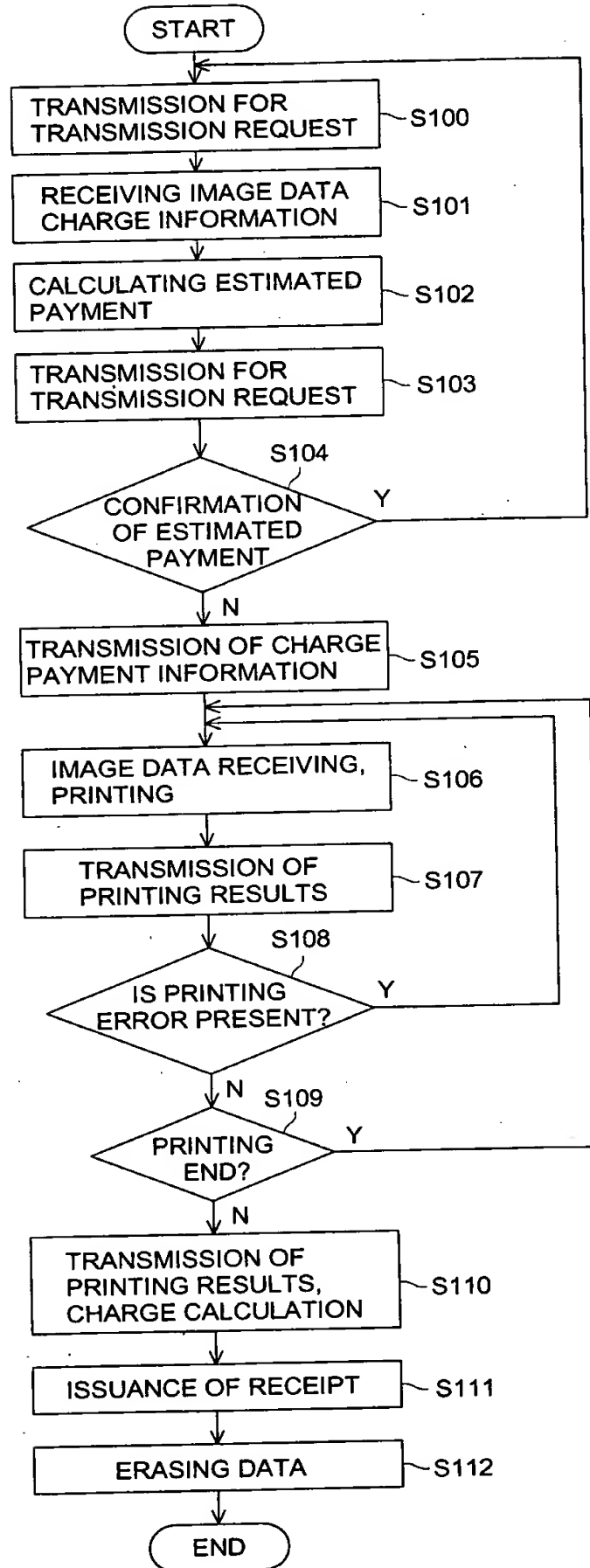
FIG. 18 (D)

PRINTING RESULTS INFORMATION

TIME AND DATE OF TRANSMISSION  
TYPES OF REQUEST  
SOURCE NAME  
PRINTING ERROR  
PRINTING TIME  
.  
.  
.

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FIG. 19



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